

In re Application of:

Koo et al.

Application No.: 10/814,695

Filed: March 30, 2004

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Atty Docket No.: INTEL1510(P18520)

REMARKS

A. The Status of the Claims and the Amendments

Claims 1-46 are pending, of which claims 14-46 were previously withdrawn from consideration. By the present amendment, claim 1 has been amended to more particularly define the Applicant's invention and to claim it with greater specificity. By the present amendment, claim 7 has been canceled without prejudice.

The amendment to claim 1 is supported by the specification and the original claims. No new matter have been added. More specifically, claim 1, as amended now recites "preparing an aqueous solution having room temperature, the aqueous solution including metal cations and a reducing agent by dissolving, at room temperature, the metal cations and the reducing agent in water." This limitation is disclosed in paragraph [0016] on page 4 of the originally filed application stating that "the metal cations and reducing agent are mixed in aqueous solution prior to heating." This limitation is further illustrated in Example 1 (paragraph [0060] on page 16 of the originally filed application). Claim 1, as amended, further recites that "the metal cations and reducing agent are each present in the aqueous solution at a concentration of at least about 0.5 M." This limitation is disclosed in paragraph [0017] on page 4 of the originally filed application and in the original claim 7.

In view of the foregoing, it is submitted that the amendments place the claims in condition for allowance. Entry of the amendments is respectfully requested.

B. Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 9 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention (item 2, page 2 of the Office Action). Specifically, the

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Examiner has stated that it was unclear whether the metal colloids recited in claim 9 are the same as those recited in claim 1.

In response, the Applicants respectfully point out that each of claims 1 and 9 is directed to the same metal colloids. Only one type metal colloids, not two separate kinds, are recited. Specifically, claim 1 recites steps for producing metal colloids, and claim 9 recites a further step of the method "comprising attaching an organic molecule to the surface" of the metal colloids produced by the method of claim 1.

In view of the foregoing, it is submitted that the rejection under 35 U.S.C. § 112, second paragraph does not apply. Withdrawal of the rejection and reconsideration are respectfully requested.

C. Rejections Under 35 U.S.C. § 102

Claims 1, 2, 7, and 8 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,945,293 to Siiman et al. (item 3 on page 2 of the Office Action). This rejection is respectfully traversed.

It is axiomatic that a valid rejection of a claim for anticipation by a reference requires that the reference explicitly or inherently describe all of the elements, limitations, and relationships recited in the claim. It is submitted that Siiman et al. does not describe all the elements and limitations recited in claim 1, as amended.

Specifically, Siiman et al. disclose a method of forming metallic colloids by reduction of silver cations (provided by, e.g., Ag^+NO_3^-) with a reducing agent (sodium citrate). Siiman et al. teach that method requires preparing a hot solution containing AgNO_3 and polystyrene aldehyde particles (col. 12, lines 58-65), followed by adding the reducing agent (col. 12, lines 65-67) and by continuing keeping the mixture at the elevated temperature for 2 to 15 minutes (col. 13, lines

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3-5) before cooling. Therefore, Siiman et al. essentially disclose a method of reduction by titrating with the reducing agent that is added **to already hot solution**.

Siiman et al. do not disclose "preparing an aqueous solution having room temperature, the aqueous solution including metal cations and a reducing agent by dissolving, at room temperature, the metal cations and the reducing agent in water," as required by claim 1, as amended. Accordingly, Siiman et al. fail to disclose every element of claim 1, and, therefore, is not a proper prior art reference under 35 U.S.C. § 102(b). Therefore, claim 1, as amended, is patentably distinguishable over Siiman et al. Each of claims 2, 7, and 8 depends on claim 1 and is considered patentable for at least the same reason. Withdrawal of the rejection and reconsideration are respectfully requested.

In addition, claims 1-4, 8, 9, and 12 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,174,677 to Vo-Dinh (item 4 on page 3 of the Office Action). This rejection is respectfully traversed.

The requirements that a reference has to meet to be anticipatory are described above. Vo-Dinh teaches making a solution by mixing AgNO_3 with either sodium citrate or sodium borohydride (col. 13, lines 65-66), followed by boiling for one hour (col. 14, line 7). Vo-Dinh fails to teach that "the metal cations and reducing agent are each present in the aqueous solution at a concentration of at least about 0.5 M," as required by claim 1, as amended. Accordingly, Vo-Dinh does not disclose every element of claim 1, as amended, and, therefore, is not a proper prior art reference under 35 U.S.C. § 102(b). Therefore, claim 1, as amended, is patentably distinguishable over Vo-Dinh. Each of claims 2-4, 8, 9, and 12 directly or indirectly depends on claim 1 and is considered patentable for at least the same reason. Withdrawal of the rejection and reconsideration are respectfully requested.

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Furthermore, claims 1, 2, 5 and 8 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by the published U.S. Patent Application No. 2004-0234958 to Smith et al. (item 5 on page 3 of the Office Action). This rejection is respectfully traversed.

The requirements that a reference has to meet to be anticipatory are described above. Smith et al. teach a method of making silver colloids by adding tri-sodium citrate to an almost boiling solution of AgNO_3 , followed by gentle boiling with stirring (paragraph [0220]). Thus, in Smith et al. the reducing agent is added to already hot solution of silver nitrate.

Smith et al. do not disclose "preparing an aqueous solution including metal cations and a reducing agent by dissolving, at room temperature, the metal cations and the reducing agent in water," as required by claim 1, as amended. Accordingly, Smith et al. fail to disclose every element of claim 1, and, therefore, is not a proper prior art reference under 35 U.S.C. § 102(e). Therefore, claim 1, as amended, is patentably distinguishable over Smith et al. Each of claims 2, 5, and 8 depends on claim 1 and is considered patentable for at least the same reason. Withdrawal of the rejection and reconsideration are respectfully requested.

Finally, claims 1, 2, 6 and 8 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by the published U.S. Patent Application No. 2001-0014717 to Hossainy et al. (item 6 on page 4 of the Office Action). This rejection is respectfully traversed.

The requirements that a reference has to meet to be anticipatory are described above. Hossainy et al. teach various methods for coating stents. Hossainy et al. disclose that colloidal gold can be prepared by reduction tetrachloroauric acid by sodium citrate in aqueous solution (example 25, paragraph [0136]). Hossainy et al. are completely silent with regard to the conditions under which the process of reduction is to be carried out.

With the reference to paragraphs [0104] and [0105], the Examiner has asserted that Hossainy et al. disclose heating the aqueous solution at 90°C, e.g., in a convection oven. It is

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respectfully submitted that the Examiner has misunderstood the teachings of Hossainy et al. Hossainy et al. do not describe the formation of metal colloids. What they do describe in paragraphs [0104] and [0105] is formation of poly(ethylene-co-vinyl alcohol) coatings on stents by applying a solution of this polymer in dimethylsulfoxide (DMSO) solvent on the stent and heating the stent up to 90°C to remove the residual solvent.

Accordingly, Hossainy et al. fail to disclose every element of claim 1, as amended, and, therefore, is not a proper prior art reference under 35 U.S.C. § 102(b). Therefore, claim 1 is patentably distinguishable over Hossainy et al. Each of claims 2, 6, and 8 depends on claim 1 and is considered patentable for at least the same reason. Withdrawal of the rejection and reconsideration are respectfully requested.

D. Rejection Under 35 U.S.C. § 103(a)

Claims 11 and 13 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Vo-Dinh in view of U.S. Patent No. 6,716,480 to Yukinobu et al. (item 7 on page 5 of the Final Office Action). This rejection is respectfully traversed on the following grounds.

It is settled law that to establish a *prima facie* case of obviousness, the following three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference as proposed by the Examiner; (2) there must be a reasonable expectation of success and (3) the prior art reference must teach or suggest all of the claim limitations. MPEP § 2143. Applicants submit that the above criteria have not been met.

Vo-Dinh describes what is discussed above but neither discloses nor suggests that “the metal cations and reducing agent are each present in the aqueous solution at a concentration of at least about 0.5 M,” as required by claim 1, as amended. Yukinobu et al. fail to cure this deficiency. Yukinobu et al. teach attaching various organic molecules (e.g., those listed in col. 5,

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lines 57-61) to gold particles via mercapto, sulfide, or polysulfide groups (col. 5, lines 39-41).

Yukinobu et al. neither disclose nor suggest employing the concentration of reducing agents recited in claim 1, as amended.

Accordingly, even if Vo-Dinh and Yukinobu et al. are combined, the combination of these three references does not disclose or suggest every element of claim 1. It is therefore submitted that claim 1 is patentably distinguishable over Vo-Dinh in view of Yukinobu et al. Each of claims 11 and 13 depends indirectly on claim 1 and is considered patentable for at least the same reason. In view of the foregoing, withdrawal of the rejection and reconsideration are respectfully requested.

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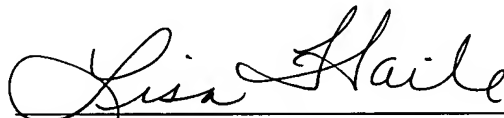
CONCLUSION

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

No fee is deemed to be due in connection with this response. However, if any additional fee is due, the Commissioner is hereby authorized to charge any other fees associated with the filing submitted herewith, or credit any overpayments to Deposit Account No. 07-1896.

Respectfully submitted,

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